2009 Annual Drinking Water Quality Report

For

Holloman AFB

(Public Water System Identification (PWSID) NM3562719)

This report is an annual snapshot of the drinking water quality delivered by Holloman AFB. Under the "Consumer Confidence Reporting Rule" of the Environmental Protection Agency's Safe Drinking Water Act (SDWA), community water systems are required to report this water quality information to the consuming public. Presented in this report is information on the source of our water and where it comes from, what it contains, how it compares to state and federal standards, and the health risks associated with any contaminants. We are committed to providing you with information because customers are our best allies.

I. PUBLIC WATER SYSTEM INFORMATION

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Water System Improvements:
Our water system is routinely inspected by the Civil Engineering Utilities Shop and Bioenvironmental Engineering (BE) of the 49th Medical Group. Civil Engineering Utilities inspects our system for its technical, financial and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, your water system is operated by Holloman certified operators who oversee the routine operations of our system. All improvements forthcoming will be addressed by the appropriate personnel.

II. YOUR DRINKING WATER SOURCE

Holloman AFB relies on surface water (75 percent) and groundwater (25 percent) for potable water. Holloman AFB is provided potable water by the City of Alamogordo and various wells located 12 to 15 miles east of the base near the foothills of the Sacramento Mountains. Surface water from Bonito Lake and natural springs located in Fresnel and La Luz Canyons is transported through pipelines to reservoirs at the City of Alamogordo's La Luz water treatment plant. The La Luz water treatment facility transports treated water to the Boles Field Pumping Station then to the base via pipeline.

Holloman's licensed treatment operators treat the water through a process called primary disinfection. The only treatment provided at Holloman AFB is additional disinfection and water softening. No fluoride addition is required because there is sufficient naturally occurring fluoride in the groundwater. Disinfection using chlorine gas currently occurs at the base water treatment plant (WTP) and just upstream of the base WTP in an underground valve box.

III. SUBSTANCES FOUND IN TAP WATER

Microbial contaminants -such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants -such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides -which may come from a variety of sources such as agricultural or urban storm water runoff, and residential uses.

Organic chemical contaminants -including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants - can be naturally occurring or be the result of oil and gas production and mining activities.

IV. WATER QUALITY TESTING RESULTS

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The EPA and State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Table 1. Holloman AFB Sampling Results

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes] (ppb)	NA	80	60	30	60	2009	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	30	20	30	2009	No	By-product of drinking water chlorination
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	0.58	NA		2009	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	0.0061	NA		2009	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Copper - source water (mg/L)		1.3	0.039(MPL)	NA		2009	No	Corrosion of household plumbing systems; Erosion of natural deposits
Arsenic (ppb)	0	10	0.57	NA		2009	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.024	NA		2009	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Lead - source water (mg/L)		0.015	0.0005(MPL)	NA		2009	No	Corrosion of household plumbing systems; Erosion of natural deposits
Selenium (ppb)	50	50	1.5	NA		2009	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

Fluoride (ppm)	4	4	0.33	NA		2009	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Mercury [Inorganic] (ppb)	2	2	0.058	NA		2009	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Beryllium (ppb)	4	4	0.15	NA		2009	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	0.043	NA		2009	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	100	100	1	NA		2009	No	Discharge from steel and pulp mills; Erosion of natural deposits
Antimony (ppb)	6	6	0.4	NA		2009	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Cyanide [as Free Cn] (ppb)	200	200	2.5	NA		2009	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories
Microbiological Contaminants								
Total Coliform (positive samples/month)	0	1	0	NA		2009	No	Naturally present in the environment
Synthetic organic contaminants including pesticides and herbicides								
Heptachlor (ppt)	0	400	53	NA		2009	No	Residue of banned pesticide
Benzo(a)pyrene (ppt)	0	200	28	NA		2009	No	Leaching from linings of water storage tanks and distribution lines
Di (2-ethylhexyl) adipate (ppb)	400	400	0.59	NA		2009	No	Discharge from chemical factories
Endrin (ppb)	2	2	0.07	NA		2009	No	Residue of banned insecticide
Hexachlorobenzene (ppb)	0	1	0.04	NA		2009	No	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	50	50	0.041	NA		2009	No	Discharge from chemical factories
Lindane (ppt)	200	200	79	NA		2009	No	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	40	40	0.042	NA		2009	No	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Endothall (ppb)	100	100	6.3	NA		2009	No	Runoff from herbicide use
Ethylene dibromide (ppt)	0	50	7.5	NA		2009	No	Discharge from petroleum refineries
Chlordane (ppb)	0	2	0.11	NA		2009	No	Residue of banned termiticide

PCBs [Polychlorinated biphenyls] (ppt)	0	500	430	NA		2009	No	Runoff from landfills; Discharge of waste chemicals
Toxaphene (ppb)	0	3	0.055	NA		2009	No	Runoff/leaching from insecticide used on cotton and cattle
2,4-D (ppb)	70	70	0.036	NA		2009	No	Runoff from herbicide used on row crops
Dalapon (ppb)	200	200	0.97	NA		2009	No	Runoff from herbicide used on rights of way
Dinoseb (ppb)	7	7	0.15	NA		2009	No	Runoff from herbicide used on soybeans and vegetables
Pentachlorophenol (ppb)	0	1	0.037	NA		2009	No	Discharge from wood preserving factories
Picloram (ppb)	500	500	0.075	NA		2009	No	Herbicide runoff
2,4,5-TP (Silvex) (ppb)	50	50	0.058	NA		2009	No	Residue of banned herbicide
Oxamyl [Vydate] (ppb)	200	200	0.35	NA		2009	No	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
Carbofuran (ppb)	40	40	0.43	NA		2009	No	Leaching of soil fumigant used on rice and alfalfa
Glyphosate (ppb)	700	700	2.5	NA		2009	No	Runoff from herbicide use
Diquat (ppb)	20	20	0.4	NA		2009	No	Runoff from herbicide use
Volatile Organic Contaminants								
Chlorobenzene (monochlorobenzene) (ppb)	100	100	0.27	NA		2009	No	Discharge from chemical and agricultural chemical factories
1,2-Dichloroethane (ppb)	0	5	0.37	NA		2009	No	Discharge from industrial chemical factories
1,2-Dichloropropane (ppb)	0	5	0.45	NA		2009	No	Discharge from industrial chemical factories
Ethylbenzene (ppb)	700	700	0.12	NA		2009	No	Discharge from petroleum refineries
Tetrachloroethylene (ppb)	0	5	0.3	NA		2009	No	Discharge from factories and dry cleaners
Toluene (ppm)	1	1	0.00023	NA		2009	No	Discharge from petroleum factories
1,2,4-Trichlorobenzene (ppb)	70	70	0.18	NA		2009	No	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	200	200	0.27	NA		2009	No	Discharge from metal degreasing sites and other factories
Vinyl Chloride (ppb)	0	2	0.33	NA		2009	No	Leaching from PVC piping; Discharge from plastics factories
Xylenes (ppm)	10	10	0.00027	NA		2009	No	Discharge from petroleum factories; Discharge from chemical factories
Carbon Tetrachloride (ppb)	0	5	0.22	NA		2009	No	Discharge from chemical plants and other industrial activities
1,1,2-Trichloroethane (ppb)	3	5	0.22	NA		2009	No	Discharge from industrial chemical factories

Benzene (ppb)	0	5	0.18	NA		2009	No	Discharge from factories; Leaching from gas storage tanks and landfills
Styrene (ppb)	100	100	0.28	NA		2009	No	Discharge from rubber and plastic factories; Leaching from landfills

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
ppt	ppt: parts per trillion, or nanograms per liter
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

V. EDUCATIONAL INFORMATION

Q Is my water safe?

A. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The local water office vigilantly safeguards its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standard.

Q. Why are there contaminants in my drinking water?

A. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Q. Do I need to take special precautions?

A. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791). You need not take special precaution.

Q. How would I know about a problem with the water supply?

A. BE and Water Utilities regularly test and inspect the water supply and the distribution system. If a problem was found, all affected people would be notified through leaflets, email, and the base newspaper.

Q. My water tastes and smells funny. Is it safe to drink?

A. According to the EPA, you can safely drink and cook with the water. Algae can cause water to have a “funny” smell and odor. Algae are normal, harmless plants that appear in the reservoirs at certain times of the year. On occasion, customers may also taste or smell the low levels of chlorine compounds added to disinfect the water. Fill a jug with tap water and put it in the refrigerator to get rid of the taste and odor.

Q. My water is cloudy sometimes but then clears up. Can I drink it?

A. You can safely drink and cook with the water. Water travels under pressure throughout the system.

Occasionally, air can become trapped in the water in tiny bubbles, causing water to look cloudy. This is only temporary and the water clears up in a short time.

Q. **My water is discolored sometimes. Can I drink it?**

A. According to EPA, you can safely drink and cook with the water. Old iron pipes in your building can cause a red, brown, or yellow color in the water. A yellow color is from iron that is absorbed by water that has been sitting in pipes for a long time. A red or brown color is caused by very small specks of iron. These specks of iron can enter the water if there is quick change in water speed or direction in your local pipes. Such changes can result from valve repair, flushing the system or the testing or use of fire hydrants. Flushing the water in your pipes sometimes will clear this up.